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Conscious Couture: Upcycling and Sustainable Style

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Project Summary

The fashion and apparel industry has become synonymously associated with wastefulness and pollution due to the high levels of production, consumption and disposal of the billions of garments produced globally each year. Throughout the industry, brands have continued to set sustainability goals for both efforts to reduce their environmental impacts as well as appeal to the ‘green’ consumer. The power that a consumer holds can be leveraged for driving sustainability related initiatives through an apparel market that is virtually available everywhere. Since the 1990s, the secondhand market has developed from simply an economically friendly place to purchase necessities, to its current state of annual growth where luxury resale and fashion motivations lead the charge (Ferraro, Sands & Brace-Govan, 2016). One way for consumers to participate in a collaborative approach to solving sustainability issues and diverting discarded apparel products from the waste stream is to shop secondhand. In addition, the secondhand market may serve as a source of ‘raw’ materials in the circular economic model. This study identified 25 locations in the Northwest Arkansas region as market centers for secondhand shopping opportunities, then categorized based on their key characteristics of price, accessibility and merchandise acquisition. The creative portion of this research also explored the potential for upcycling post-consumer products acquired through the secondhand market to serve as a viable way for an individual to participate more sustainably in fashion apparel. A garment acquired from the secondhand market was upcycled and given new life to inspire others to recognize the merit of upcycling and secondhand as integral to the circular economic model and the future of sustainability in fashion.

Introduction

Background and Need

While the apparel industry accounts for just 2% of global GDP ringing in at a \$3 trillion value, it ranks within the top five most polluting industries – competing with oil, transportation, and agriculture (Global Fashion Agenda, 2019; Willow, 2017; Wicker, 2017). Also, while it boasts a nearly \$2 billion profit in 2019 with 10% anticipated annual growth, most apparel production takes place in locations where workers are subjected to unsafe working conditions and are often paid less than \$3 per day. Around 70% of the 150 billion garments produced annually are discarded by Americans after just 7-8 wears and find their final home in either a landfill or incinerator. Less than 1% of annually produced textile goods are recycled into other products, which still requires a large energy input (Circular Fashion, 2017). Addressing the impacts of these issues and exploring alternatives is necessary to improve conditions. Sustainability is a current buzzword in the fashion industry, however, quantifying the term is still lacking in a way that consumers can understand and make informed decisions about brand claims.

The recent strive to be ‘sustainable’ as promoted by online influencers, brand marketers, and specialized retailers, is one while made with the best intentions, often falls short of making successful changes for the planet and the people who produce apparel products. What many consumers fail to realize is that by purchasing additional products such as ethically made clothing or opting for recycled textile fibers with efforts to be more sustainable in their daily lives, they simply perpetuate the message of mainstream marketing which prioritizes making another purchase from a corporate producer rather than reusing what one already has, reducing the consumption of that product line, or recycling a consumed product into one with a new purpose.

However, a segment of the apparel industry categorized as the ‘secondhand sector’ of the market operates in the selling and purchasing model of retail but encourages used or pre-owned goods through a variety of sources to sell to individuals rather than new products. In the last 10 years, the secondhand market has grown considerably especially among the youth consumer group as a novelty shopping experience and thrifting, or consuming secondhand goods, has become trendy.

Problem Statement

The rates of production, consumption, and improper disposal of textile goods by the apparel industry perpetuate a mindset of consumption which does not allow for equitable, environmental, or economical sustainability of the lifestyle desired by global consumers. The secondhand sector of the apparel market is on the rise yet is still not commonly recognized by consumers as a viable or desirable alternative to shopping new at retail. The potential of the secondhand apparel market to serve and profit individuals within rural and urban communities is unrealized and unfulfilled.

Purpose Statement

This creative project seeks to design and produce an upcycled garment which promotes the potential of the secondhand apparel market as a viable and desirable option to Northwest Arkansas (NWA) local consumers.

Research Objectives

The following objectives guided the study:

1. To analyze the local secondhand market on the points of variety, accessibility/location, and price.

2. To create a couture set of garments entirely constructed of reclaimed, repurposed and/or recycled materials.
3. To promote and show the collection of garments in an NWA local public forum alongside educational materials about the potential of the secondhand sector.

Literature Review

In preparation for this research, a review of what sustainability is in relation to apparel is key to going forward. The state of research in the fashion industry is often done by corporations and explores consumer mindsets, buying patterns and trend analysis. This is in opposition to a more sustainable apparel and perpetuates a 'More Mindset'.

Sustainability in Apparel

Typically, sustainability is measured or noted from three perspectives: 1. Environmental, 2. Economic, and 3. Social. In the fashion industry, sustainable priorities vary dependent on who's opinion takes the forefront. Brands and marketing programs tend to focus on the importance of what they excel at, and diminish what issues still fall within the production stream. This leads to a lack of transparency between with the consumer and can lead to distrust when brought to light. An example would be the Fashion Revolution movement and the message "I made your clothes," which surfaced when consumers realized the systemic inequitable state of the fashion production industry. Additionally, ventures into discovering the fashion designer's role in the sustainability of the products which they create have begun to understand the need for planning disposal even at the point of design conception (Claxton, Kent, 2020).

Analysis of the Secondhand Market

The question of sustainability in fashion is a growing global concern, but the average consumer does not shop on a global mindset. Quality of product is a top concern, followed by style, and then cost effectiveness are the main prioritizations when considering consumer behavior. Sustainability awareness is the top priority for a mere 7% of buyers (Global Fashion Agenda, 2019). While consumer motivations for purchasing products vary based on demographic factors, including geographic location and economic status, the simple action of making a purchase and “voting with your dollar” supports the brands from which we buy.

In comparison to shopping new at retail, consumers of the secondhand market have a different set of prioritizations by which they make purchases. A 2016 study focused on the fashion aspect of consuming secondhand identified four key motivations of the market consumers: (a) critical motivations; (b) economic motivations, (c) recreational motivations, and (d) fashion motivations (Ferraro, Sands & Brace-Govan, 2016). This research is critical because it illustrates that people do not simply choose to purchase pre-owned because of economic reasons as many mistakenly perceive, but for the principle (critical), experience (recreational) and style (fashion) potential that shopping secondhand holds. The same study finds that a polarized majority, being 83%, of secondhand consumers, are driven by the fashion motivation when shopping in used goods stores. This uncovers the potential companies have to expand their markets by setting high fashion as a core business value, as opposed to quantity of merchandise, affordable prices, and breadth of product categories. The high fashion category also yields higher profits when paired with business tactics such as creativity within store displays, diversification of partnerships (Gopalakrishnan & Matthews, 2018).

In respect to purchasing motivations for the secondhand market, perceived consumer risks are also important to assess when analyzing the potential of resale to serve a wider portion of the apparel consumer base. An empirical investigation to the barriers to consumer mindsets when shopping secondhand identified three types of perceived risk: concern for quality and cleanliness, limitations to the degree of self-enhancement/expression, and fears for perception of declined social image thus worry for acceptance (Hur, 2020). While there is limited quantitative data to describe the current and potential growth of the secondhand consumer market, a compilation of ideas within this research would promote analysis of current market tactics, seeking out changes to be made. Results of such could inspire more creative approaches to alleviate or lessen the degree to which risks are perceived and stimulate positive motivations for shopping secondhand.

An avenue that also exists within of secondhand consumption is the typically individualized and nuanced role of ‘upcycling’, which refers to using discarded or repurposed materials to increase value of said recycled materials. Regarding upcycling, while there the research is limited to the individual level, it points to women as most active group (Janigo, Wu, DeLong, 2017). Due to the nature of the specificity that often is required in producing upcycled products, it is quite difficult to scale to industry level necessary for mass consumption. However, some UK brands have begun to successfully implement upcycling as a sustainable alternative to current industry production standards (Han, Chan, Venkatraman, Apeagyei, Cassidy, Tyler, 2016). Reducing waste by using discarded or secondhand textiles as the basis for new production. This is a growing field for smaller businesses and brands dedicated to sustainability in fashion.

Collaborative Fashion Consumption (CFC) and the Circular Economy

Another aspect of the secondhand market's potential positive impact on increasing sustainability in the apparel industry lies in the fact that it can create and sustain a circular economic and product flow, known as the circular economy, closed loop system or cradle-to-cradle (Ellen Macarthur Foundation, 2017). In many cases, the customers of a local secondhand market are the primary partner as well as suppliers for secondhand stores like the consignment or purchase out right models (Gopalakrishnan & Matthews, 2018). For example, at A-Line Consignment Boutique (located in Fayetteville, AR) many consignors who bring in their clothes each season to sell, also shop at the store. The profits of the store are shared by the customers, either in the form of accounts payable or store credit, which supports the community through a circular economy of cash and clothing flow. This type of business models aligns with a methodology categorized in 2018 by Gopalakrishnan & Matthews known as Collaborative Fashion Consumption, or CFC. This methodological approach to materials sourcing evaluates the environmental impacts of garments as highest post consumption in the care, replacement and disposal stages. To reduce the amounts of environmental impacts of textile apparel waste in a community, implementation of CFC could supply a circular economic approach to apparel and fashion (Iran, Schrader, 2017).

Overall, the sustainability mindset and values of such in regard to the apparel industry are not completely in alignment across consumers, environmentalists, marketing and producers.

Development Plan

The development of this creative research project occurred over the course the fall 2020 and spring 2021 semesters. The creative project's objectives included analyzing local secondhand

markets, constructing a garment from reclaimed goods, and sharing the final work and findings with the public were achieved based on the following steps:

Analyze Secondhand Markets

The secondhand clothing markets in the Northwest Arkansas (NWA) area were identified by through online searches, social media, and word-of-mouth research. They were categorized into four groups which communicate their price points, acquisition of inventory, and basic nature of goods sold. These categories are: (a) thrift; (b) outright resale; (c) vintage; (d) consignment.

Acquire Desired Materials

The acquisition of materials for the upcycled garment occurred over the course of collecting garments from donations by A-Line Consignment Boutique which were intended for thrift stores. A multicolored patterned jacquard weave satin brocade coat was identified as the desired final fabric for the upcycled garment. A prototype fabric which functions similarly to the jacquard satin in construction was identified to test the pattern design.

Design the Garment/s

The design of the garment/s was completed first analyzing current fashion styles to identify trends which stand out as haute couture. A series of creative sketches were made based on original design ideas as well as inspiration from trend research. A design was finally solidified and technically sketched from 3 sides; front, back and side, to create the pattern for the garment (Figure 1).

Create a Custom Pattern

A female model was identified whose measurements were taken to create the basic pattern on which modifications were made to build the original pattern design for the garment.

The researcher used the Lectra Modaris software to digitally create, modify and prototype the pattern for the upcycled garment.

Build a Prototype

An initial print of the digitally created pattern was made, then cut and sewn in a reclaimed prototyping fabric. This prototype fabric was similar in hand, thickness and body to the intended final fabric of the upcycled garment. This prototype did not include finishing to seams or findings such as boning and closures, yet these findings were accounted for in the analysis of the quality of the prototype pattern. Any modifications, edits or additions to the original pattern were made on this prototype garment, then recorded and made to the pattern accordingly.

Create Final Garment/s

The final garment was produced by careful deconstruction of the jacquard brocade coat to preserve the fabric, necessary seams and trims. Then the deconstructed coat was cut and sewn based on a modified and reprinted digitally created pattern, per the accommodations made to the prototype pattern.

Photograph and Display Final Garment/s

This point in the development faced adaptation as described below, for health and safety reasons due to the COVID-19 pandemic. The final product is set to be filmed on the model for the University of Arkansas's Apparel Merchandising and Product Development program's annual fashion show, Enclothe. The 2021 show is set to be a virtual, so the CCL will be editorially photographed and filmed to create a video-graphic digital viewing experience. The visual experience will be presented alongside educational materials about secondhand fashion and the purpose and potential of upcycling in apparel.

The reproducibility of a garment made solely of reclaimed textile and apparel goods is feasible requiring skills and creative ability in the realms of sourcing, design, pattern making, and garment fitting. These steps allowed for the findings of secondhand market research and the final garment's creation to be realized through an NWA focused lens.

Design Process and Creative Works

Garment Design

The inspiration for the design of the Conscious Couture look (CCL) was derived from the knowledge that upcycling often consists of piecing together smaller scraps or saved bits of fabric to create a swath of yardage to serve as the basis for a garment. While the CCL was not made from scraps, yet rather one deconstructed coat, the design was intentionally created to mimic a pieced-together look. The CCL is constructed of 32 separate pieces, 19 in the skirt and 13 in the bustier. The skirt and bustier top feature sharp lines and curves which fit close to the body and mimic the tailored look of haute couture. The bustier garment also features a pleated texture on the bust cups which add interest and dimension to otherwise rigid garments. The pleating texture was achieved by pattern draping on a mannequin with a prototype fabric (Figures 2, 3 and 4).

The goal for the CCL was to create a set of garments which did not appear to have once existed in a state without desire. The design represents the strength and structure of the intimate interdependency of the systems which our world is built upon, whilst appearing to be a simplistic and easy to digest visual. The matching set is only interrupted by the decorum of the bust cups, stark in color and lacking in pattern, yet making up for a simplistic beginning by incorporation of the most delicate and precise pleats. This portion of the garment represents the

potential of the apparel industry to transform from the metaphorical lining of a discarded coat which was on its way to an unknown future, to the stunning accent of an upcycled creation. The front and center focus of the lining featured on the bustier illustrates the transformative nature of secondhand apparel, both for individualistic style and a more sustainable future for fashion.

Deconstruction

Throughout the deconstruction process of the thrifted coat (Figure 5) preservation of the largest swaths of fabric were carefully maintained. The only cuts into the coat that were not directly cutting out pattern pieces were made along existing seamlines in the armseye, sleeve, and for removal of the lining & trims from the coat along the front closure and edges of the garment. All scraps were collected throughout the entirety of the construction process. These scraps were used for stitch and heat testing, as well as for gleaning trims like the coat's bias trim which became the binding for the raw edges of the bustier and skirt hem. The initial pattern pieces which were retrieved from the initial garment were the bodice panels of the bustier. All but the center front panel, which was the widest panel, were extracted from the sleeves of the coat (Figure 6). The second cut was into the breast pocket area of the left front panel of the coat, from which the bustier center panel was extracted. The third cuts made into the initial garment fabric were the skirt front and back, which were extracted from the side front panels of the coat, as well as the entire back of the coat (Figure 7). The final pattern cuttings were from the lining of the coat. Two rectangles were cut from the interior of the coat for the pattern piece of the pleated bust cups. Throughout the deconstruction process, attention to necessary grainlines was a difficult but prioritized point in cutting out pattern pieces. Each piece was cut as close as possible to the necessary grainlines, yet since the organic pattern of the fabric, there was leniency in direction.

Construction

The CCL was constructed on a Juki industry standard sewing machine, with the aid of basic seamstress's tools such as a steam iron, measuring tape, seam gauge and other assorted sewing instruments. Additional findings which were not derived from the original coat included one 9-inch separating zipper, plastic featherweight boning, fusible lightweight woven interfacing for the bustier, a 7-inch invisible zipper for the skirt, as well as ¼ inch fusible seam tape. The cost of these additional findings amounted to \$14.75. Thread was not a factor in the cost of the additional findings because it was reused from prior projects. Two 'U' shaped underwires were also additional findings, but not factored in for cost because it was reused from another retired garment.

After cutting out all pattern pieces from the deconstructed coat, each piece was serged along the edges with a 4 thread overlock sewing machine to prevent fraying and snagging of the brocade fabric. Normal seams were used with a 5/8-inch seam allowance throughout the construction of the CCL. Attention to details like intentional pressing of seams flat, trimming excess seam allowance to eliminate bulk, and top stitching were key points to making the CCL not appear 'handmade' and thus representative of haute couture.

Bustier: The bodice was sewn together first at the lines of panels, working towards the center. After the bodice pieces had come together, the garment was placed on a mannequin to reshape the waistline hem. A symmetric rounded look that was higher on the sides is what the sketch entails, so a hand drawn line was made whilst on the mannequin, to account for the curve of a body. This line was cut and serged to finish the waistline hem. The bustier cups were made by fusing a lightweight woven interfacing to the aforementioned rectangles cut from the lining of the coat. The interfacing added the necessary structure to the otherwise delicate satin lining

fabric, which has a high amount of drape and little body. Then the bust cup pattern piece was cut with a clean edge so that the fusible interfacing was essentially a second layer of thickness to the entire piece. Pattern markings were transferred precisely to indicate where the necessary pleats should be folded and stitched. The top raw edge was folded and secured using fusible hem tape for a clean and stitch-less look. Then the tucking method for pleating was used to create an arch shaped, seashell look on the bust cups. The same method for finishing the top edge raw hem was used to fold and finish the bottom raw edge. The bust cups were placed in the desired location on the bodice front and stitched down using a top-stitch. A channel was then sewn parallel to the securing top stitch, where a 'U' shaped underwire was inserted and secured. Next the boning channels were attached along three of the four seamlines of the bodice front and sides. Each of the panel seams were topstitched $\frac{1}{4}$ inch from either side of the seamline to integrate the boning channel stitches throughout the bustier and provide a finished effect. Then the boning was inserted and secured. The bodice was finished by binding the neckline and hemline with a single fold bias removed from the front edge and hem of the deconstructed coat. The binding was attached using a single top-stitch with the aid of a line of fusible hem tape. Finally, the separating zipper was inserted in the center back opening.

Skirt: The skirt pattern pieces were matched at the seamlines and joined working towards the center on both the back and front of the garment. Each seam allowance was pressed open, trimmed, and serged to remove excessive bulk which resulted from seven seamlines joining at the center front of the skirt front. The right-side seam was left open for later insertion of an invisible zipper closure. After the entire skirt was assembled, the need for a waistline facing arose. A pattern piece was not designed and cut for this, as the designer intended to make adjustments to the waistline for fit and shaping which was determined after the pattern design

process. Conveniently the scrap of the button placket facing from the deconstructed coat was long enough, and easily converted to the necessary curved 3-inch width of a waistline facing for the skirt. It also already had a clean edge as it acted as the lining to the center front closure of the coat. The waistline facing was attached, under-stitched and then top-stitched for support and security of the skirt waistline. Next, the invisible zipper was inserted into the open right-side seam, and the rest of the skirt was closed by joining the front of the skirt and the back of the skirt and the right-side seam. Finally, the skirt was finished by serging along the bottom edge for a clean hem, and the bias binding was attached with a single stitch and a line of fusible hem tape.

Results

The CCL came together in an easily reproducible fashion which demonstrates the merit of upcycling as an avenue of sustainable apparel when done correctly (Figures 8, 9, and 10). The proper planning and development done on the front end by the upcycling designer allowed for a more fluid deconstruction and consecutive reconstruction process to upcycle used, thrifted, or discarded garments.

Knowledge of fabrics and the way they work is also necessary for an upcycling project such as this, as the materials gathered from post-consumed garments are often produced specifically for the designs of their past lives. Analysis of the materials an upcycling designer is working with is also important to plan and decide if a designer's idea is applicable for certain upcycling projects. Important notations to make in regard to fabric or material analysis include: identification of the grains of the fabric and the amount of usable material on the necessary grain, the potential of raw edges to fray, weave or knit patterns, as well as fiber content. All of these

characteristics of prospective materials may impact the quality and success of a designer's vision for an upcycling project.

Evaluation

Preparations made for the CCL included a designer's sketch and ultimate end goal idea, followed by meticulous measurements, then precise pattern design based on said measurements, as well as knowledge of pattern design. When creating a pattern for an upcycled design, gauging available material surface area is key to efficient and minimal waste production. For example, the original garment used for the CCL would not have been an appropriate choice to upcycle into a long skirt, or pair of pants, due to the nature of the preconstructed design of the coat. As the CCL was constructed of over 30 pattern pieces, an upcycling designer would be mindful to factor in piece-ability into an upcycled design. Allowing room for error will lead to higher rates of upcycling success. The CCL pattern pieces were oddly shaped and required more construction time, yet the nature of the narrow pieces which fit together allowed for conservation of materials in the cutting stage of production (Figures 11 and 12).

The careful execution in the production stage which allowed for the CCL to come together without error firstly included the minimal destruction of the original garment to preserve fabric swaths. Secondly, extra steps taken to prevent damage whilst in production, such as serging all raw edges prior to sewing pieces together and adding a stiffening interfacing to certain portions of the garment, promoted the upcycling success of the CCL. Finally, the attention paid to details such as thread clipping, live model fitting, as well as finishing tactics like topstitches and hidden closures elevates the CCL to the status of 'Conscious Couture.'

Giving new life to a discarded garment or set of materials thought to have little or no value is the essence of 'upcycling'. To 'recycle,' often materials are broken down into less or

equally as valuable products as the initial state. The Ellen Macarthur Foundation's vision for the apparel industry to exist in the cradle-to-cradle closed loop material system would require consumer participation to eliminate the amount of post-consumer materials in global existence. The colloquialism, 'Think globally and act locally,' as related to making more sustainable choices in one's life, leads the apparel consumer to participate in their own community's apparel market. Removing discarded apparel products from the inevitable waste stream that follows initial consumer use is an individual's route to beginning a cradle-to-cradle movement, with the ability to continue to express their own individual style and participate in the fashion world economically and sustainably.

Conclusions and Discussion

NWA Local Secondhand Market

Five major cities were identified as centers of commerce and consumption in Northwest Arkansas: 1. Fayetteville, 2. Springdale, 3. Bentonville, 4. Rogers, and 5. Siloam Springs. Within these cities, a total of 25 locations for shopping apparel secondhand were identified. These 25 locations were divided into price categories based on a rubric which coordinates with the business model, inventory acquisition, and average price of products supplied by each seller. These price categories are: 1. Thrift, 2. Outright Resale, 3. Consignment, 4. Vintage. *Table 1* demonstrates each category's reflection of the rubric described above.

Table 1

Price Category Descriptions Rubric

Price Category	Business Model	Inventory Acquisition	Average Price (\$-\$\$\$)
1. Thrift	Products sold at higher volumes, quick inventory turnover, no cost of goods = price of processing	Typically local community donation, business takes ownership of products, donating consumer = supplier	\$ low: most products average between range of \$1 - \$30
2. Outright Resale	Business sells products and takes entire share of profit, cost of goods = purchase price from consumer	Business takes ownership of products by purchasing from consumers, consumer = supplier	\$\$ median: most products average between range of \$10 - \$50
3. Consignment	Products sold at median prices & profits are shared with consignor, cost of goods = percentage of selling price designated to consignor	Business does not take ownership of inventory, products owned by consumer (consignor)	\$\$ median: most products average between range of \$10 - \$50
4. Vintage	More exclusive products sold in lower quantities at higher prices, products are not available in cost of goods = purchase price from specialty market or direct consumer	Inventory typically procured through specialty market buys by business, occasionally outright resale acquisition from consumer, business takes ownership of products	\$\$\$ high: Most products average between range of \$20 - \$80

Table 2 categorizes each identified secondhand shopping location based on the price categories and location. The businesses identified in Northwest Arkansas fall under these categories explicitly, although discrepancies may arise with this rubric in other areas.

Table 2

NWA Secondhand Shopping Opportunities Price Categorization Analysis

City in Northwest Arkansas	Price Category			
	1. Thrift	2. Outright Resale	3. Consignment	4. Vintage
Fayetteville	Beautiful Lives Fayetteville Goodwill MLK Blvd. Potters House Thrift Store Goodwill College Ave.	Platos Closet Daisy Exchange	Aline	Cheap Thrills Grey Dog vintage Recollect Ltd. Dirtbag Vintage Crimson & Clover Vintage High Voltage Vintage
Springdale	Goodwill Potters House Thrift Store	NWA Plus Size Fashion		Dela DeVille's Vintage
Rogers	Goodwill Salvation Army	Platos Closet	Clothing Connection	
Bentonville	Goodwill Beautiful Lives Bentonville			
Siloam Springs	Potters House Thrift Store Beautiful Lives Siloam Springs			

On the point of variety, the NWA secondhand market shows an array of different types of business models and product category offerings from general thrift to specialty categories like plus and vintage. There are more frequent and regionally accessible opportunities for thrift categorized secondhand shopping centers, as 12 out of the 25 secondhand locations identified in NWA fall under the Thrift price category. The second most occurring price category is Vintage, although this price category is not as accessible to the entirety of NWA. All of the Vintage price category businesses identified within this study are located in Fayetteville.

As far as accessibility, the city of Fayetteville holds the most opportunities for secondhand consumption, followed by Springdale, then Rogers, and finally Bentonville and Siloam Springs. This directly correlates with the population size of each city, Fayetteville having the largest population size of 89, 540 and Siloam Springs having the smallest population of the identified NWA cities at 17, 495 (World Population Review, 2021). However, the distances

between each of the secondhand market center cities identified in Northwest Arkansas does not exceed a travel time of more than 45 minutes, the furthest drive being from Fayetteville to Bentonville.

In conclusion, 25 different secondhand shopping locations are available and easily to moderately accessible to NWA consumers. These secondhand locations are available in a variety of price points and product offerings based on the different types of business models outlined in the price category rubric (Table 1). Based on these findings, consumers in Northwest Arkansas currently have the available resources to move towards secondhand consumption as a viable avenue for apparel consumption or material sourcing for upcycling post-consumer apparel products.

Limitations and Future Research

Shopping secondhand is an avenue by which sustainable fashion may be approached, especially on an individual and local level. When viewed through a creative lens, the limitations established by the existing products available on the secondhand market are realized not to be limitations at all. The cradle-to-cradle and upcycling model allows all materials to be regarded with potential to be more than their past lives. Societally, the limitations which arise are related to materials availability and the knowledge of the upcycling techniques described in the Results and Evaluation sections of the Design Process and Creative Works of this project. However, the ability to learn these types of processes and key points for upcycling success are completely accessible via the internet and especially the rise of social media creatives who share DIY videos and How-To's. An individual's limitations for success can be overcome with the will to learn and adapt. Society's limitations to move towards upcycling as an avenue for sustainable clothing are contingent on individuals' willingness to change their consumption but especially their disposal

practices. The upcycling model is dependent on keeping materials out of the waste stream, and sustaining circularity of a cradle-to-cradle system. The collaborative fashion consumption (Gopalakrishnan & Matthews, 2018) is the basis of a social and industrial shift towards upcycling.

Future progress or research into the feasibility of upcycling to serve as a viable way to clothe society without stripping style and individuality in fashion would likely address consumers' willingness and potential to adapt towards such a model for dress. While many consumers may admire the idea of sustainable fashion, as reflected in the research addressed in this study, majority will still not value it to the point of sacrificing convenience in price and accessibility. Making a positive change towards a more sustainable fashion and apparel industry will inevitably begin with consumer demands for companies to drive change and be more responsible, which will influence policies, and eventually sustainability of the production industry. Upcycling and shopping secondhand at the local level is one potentially viable way to give consumers the agency to drive the kind of change that will affect the global state of affairs.

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Appendix

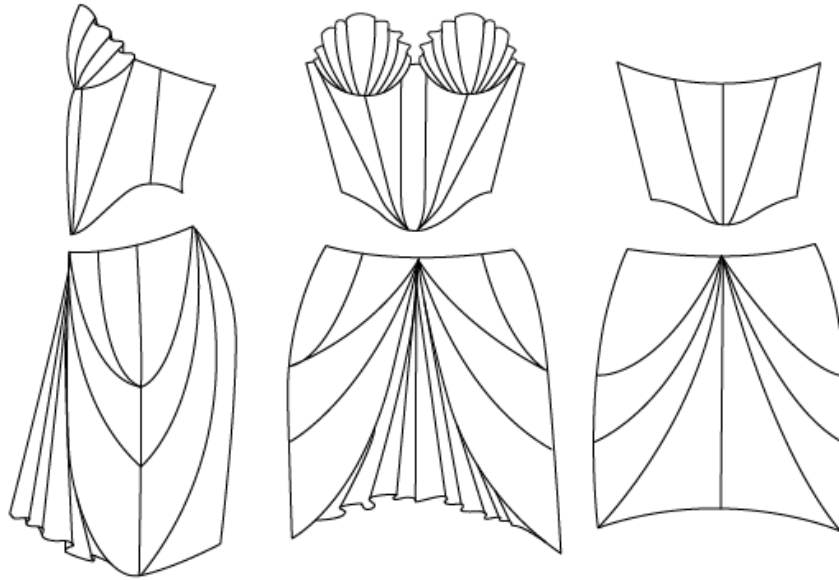


Figure 1. Technical Design Sketch



Figure 2. Draped bust cups & prototype bustier

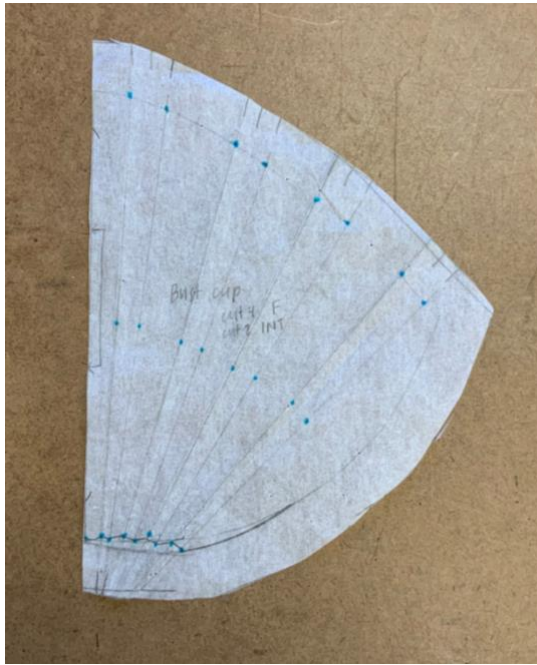


Figure 3. Bust cup pattern



Figure 4. Prototype bust cup



Figure 5. Thrifted Coat, initial state

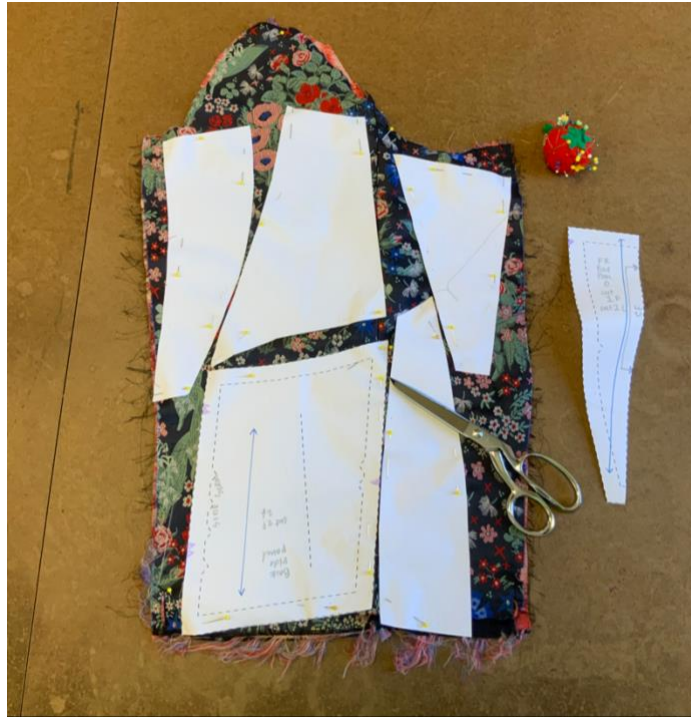


Figure 6. Bodice panel pieces cut from sleeves



Figure 7. Skirt panels cut from coat back & front sides



Figure 8. Front finished CCL



Figure 9. Back finished CCL



Figure 10. Detail of bustier & bust cups

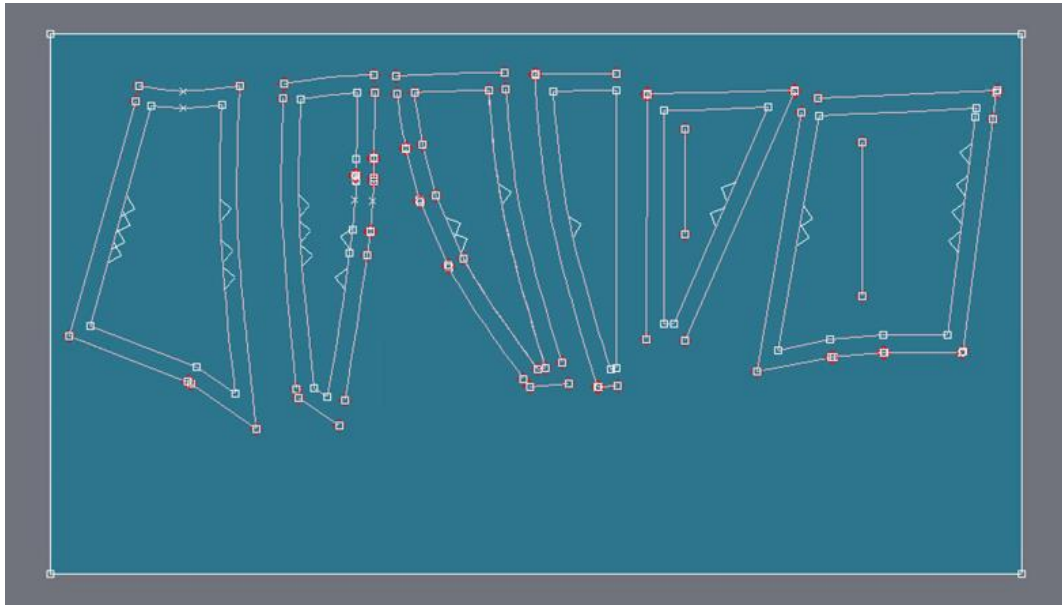


Figure 11. Bustier Pattern Design

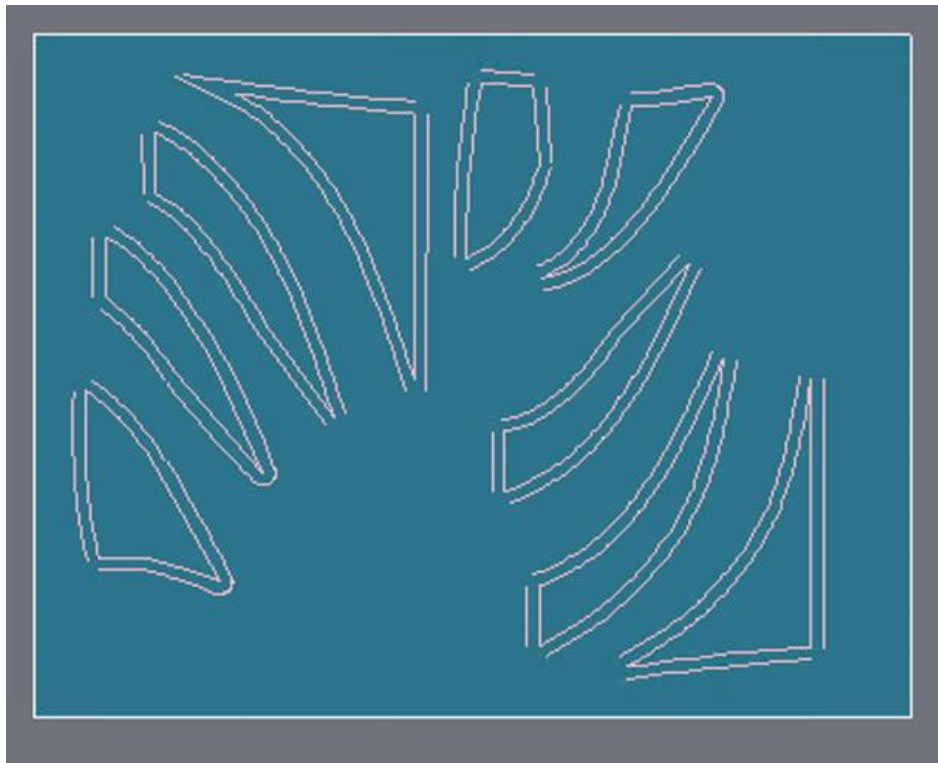


Figure 12. Skirt Pattern Design